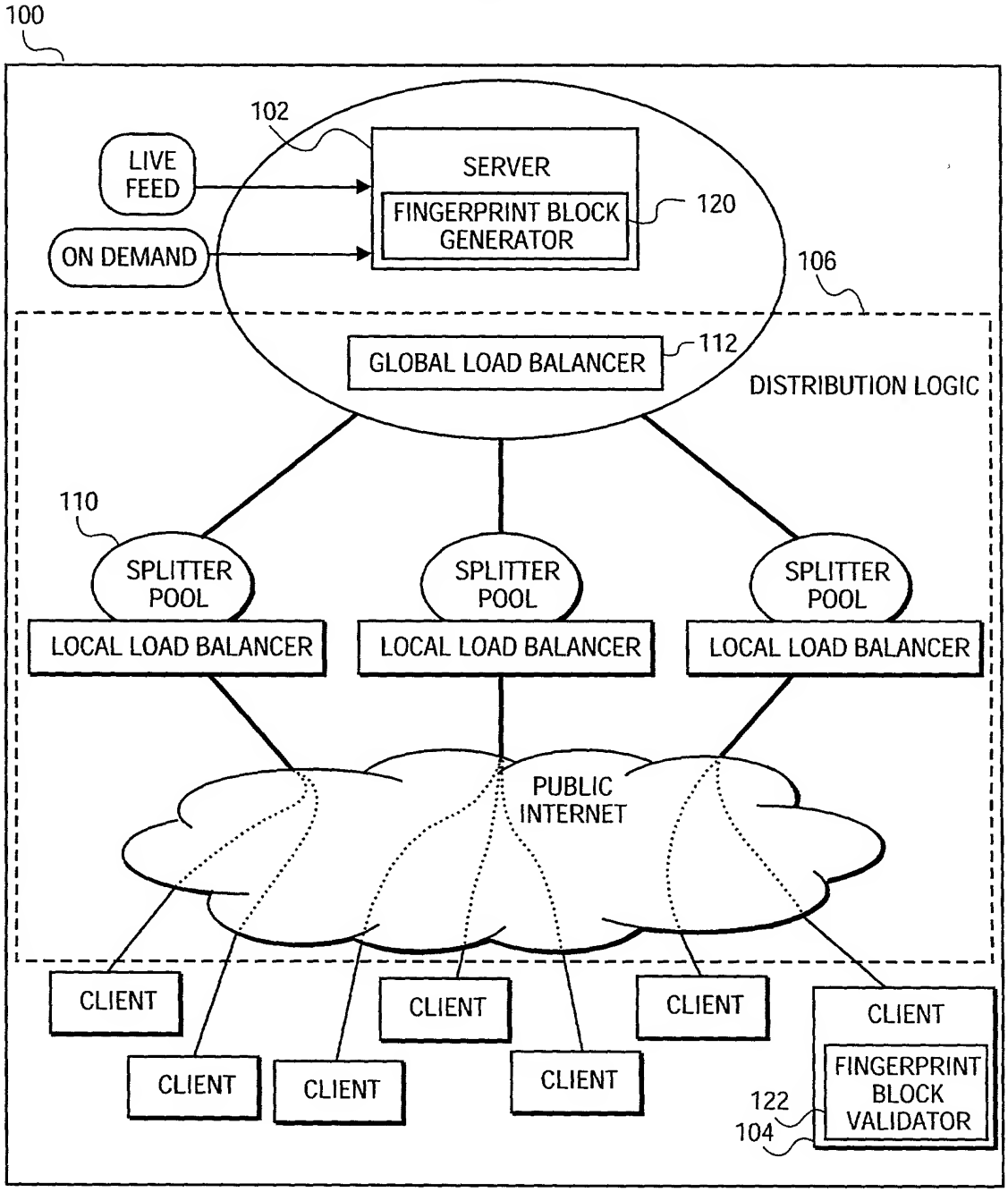

FIG. 1

Microsoft-1005

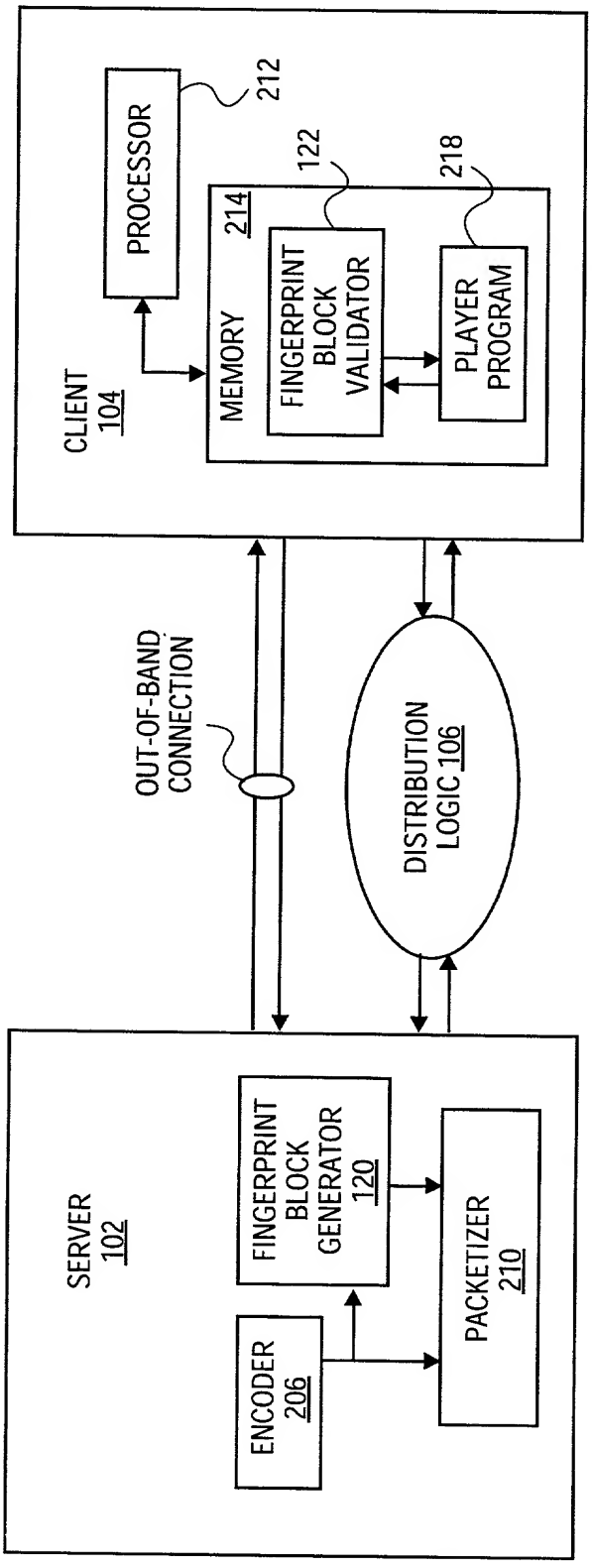
CLIENT
104
PROCESSOR
212
MEMORY
214
FINGERPRINT
BLOCK
VALIDATOR
122
PLAYER
PROGRAM
218
OUT-OF-BAND
CONNECTION
DISTRIBUTION
LOGIC 106
SERVER
102
FINGERPRINT
BLOCK
GENERATOR
120
ENCODER
206
PACKETIZER
210

FIG. 2

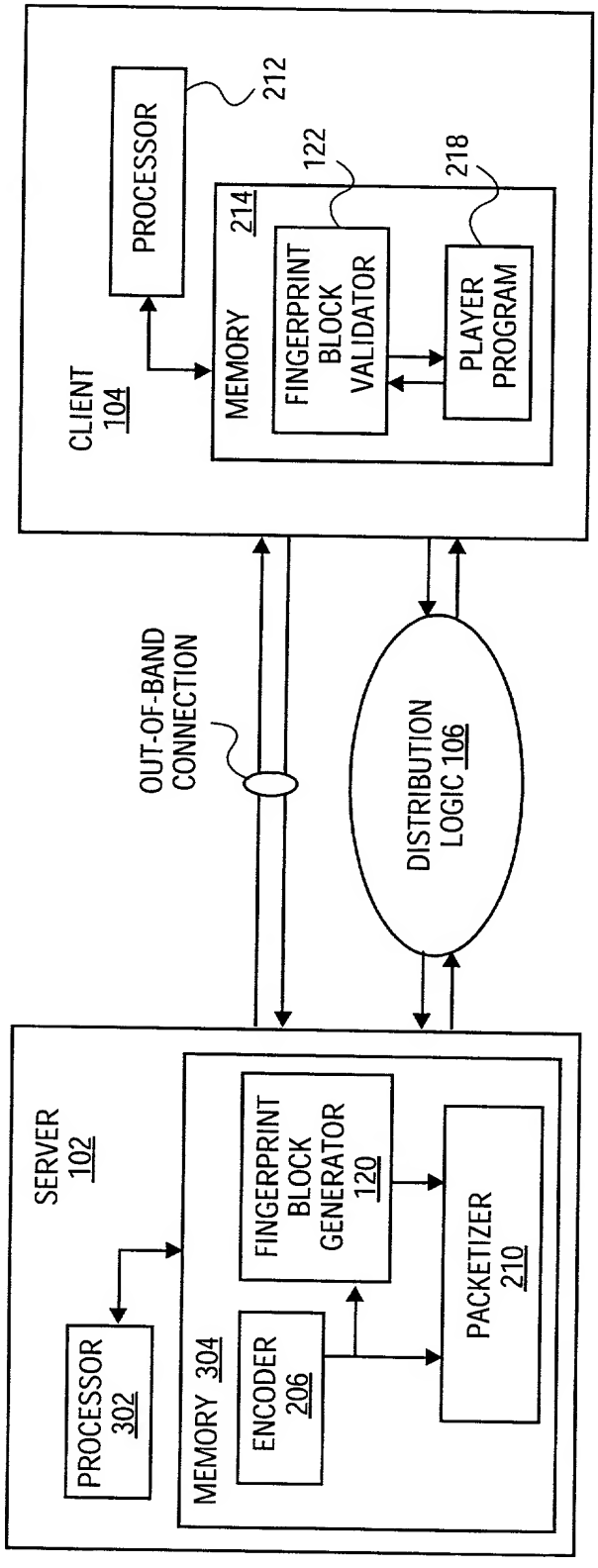
CLIENT
104
PROCESSOR
212
MEMORY
214
FINGERPRINT
BLOCK
VALIDATOR
122
PLAYER
PROGRAM
218
OUT-OF-BAND
CONNECTION
DISTRIBUTION
LOGIC 106
SERVER
102
PROCESSOR
302
MEMORY 304
ENCODER
206
FINGERPRINT
BLOCK
GENERATOR
120
PACKETIZER
210

FIG. 3

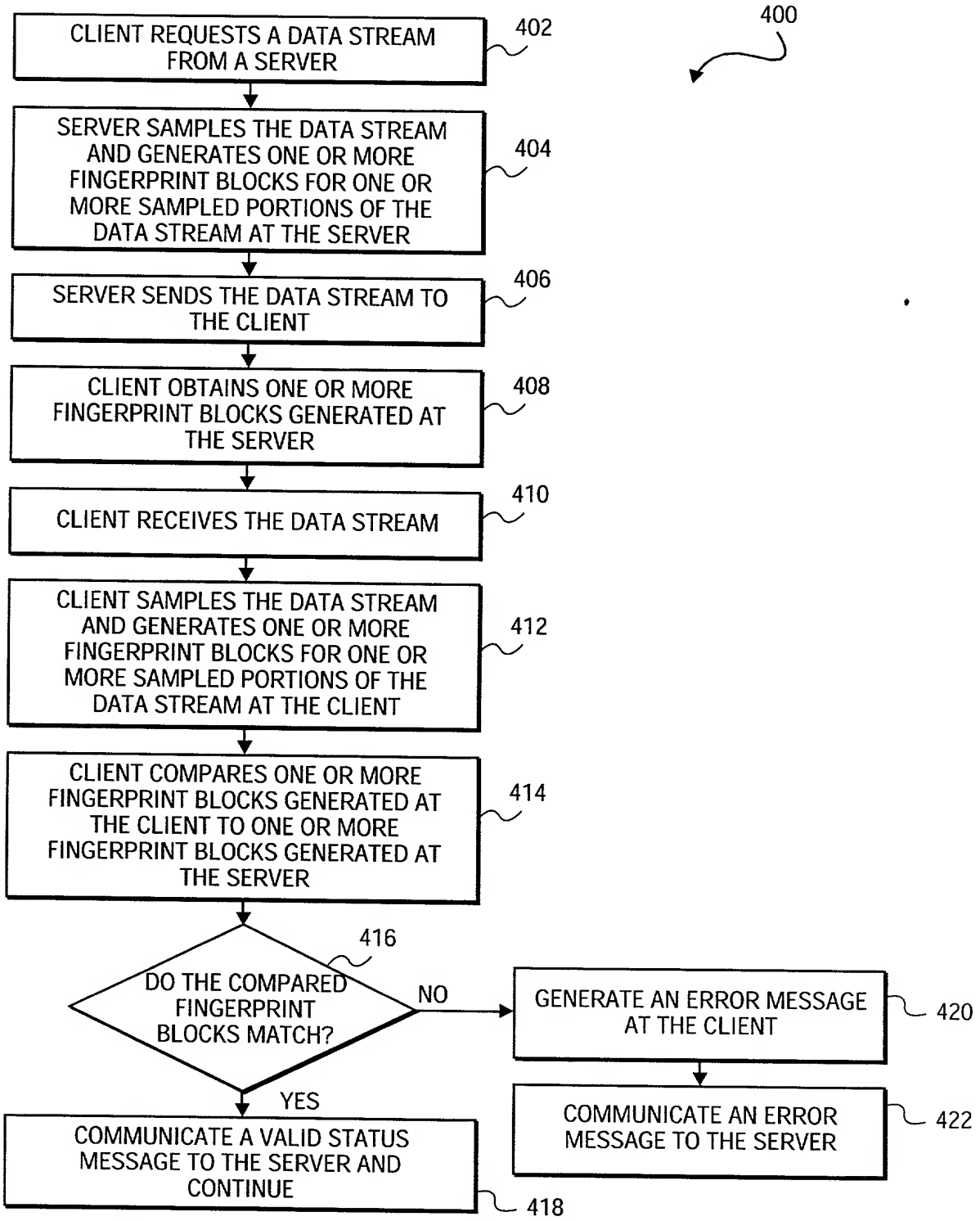
400
CLIENT REQUESTS A DATA STREAM FROM A SERVER
402
SERVER SAMPLES THE DATA STREAM AND GENERATES ONE OR MORE FINGERPRINT BLOCKS FOR ONE OR MORE SAMPLED PORTIONS OF THE DATA STREAM AT THE SERVER
404
SERVER SENDS THE DATA STREAM TO THE CLIENT
406
CLIENT OBTAINS ONE OR MORE FINGERPRINT BLOCKS GENERATED AT THE SERVER
408
CLIENT RECEIVES THE DATA STREAM
410
CLIENT SAMPLES THE DATA STREAM AND GENERATES ONE OR MORE FINGERPRINT BLOCKS FOR ONE OR MORE SAMPLED PORTIONS OF THE DATA STREAM AT THE CLIENT
412
CLIENT COMPARES ONE OR MORE FINGERPRINT BLOCKS GENERATED AT THE CLIENT TO ONE OR MORE FINGERPRINT BLOCKS GENERATED AT THE SERVER
414
DO THE COMPARED FINGERPRINT BLOCKS MATCH?
416
NO
GENERATE AN ERROR MESSAGE AT THE CLIENT
420
COMMUNICATE AN ERROR MESSAGE TO THE SERVER
422
YES
COMMUNICATE A VALID STATUS MESSAGE TO THE SERVER AND CONTINUE
418

FIG. 4

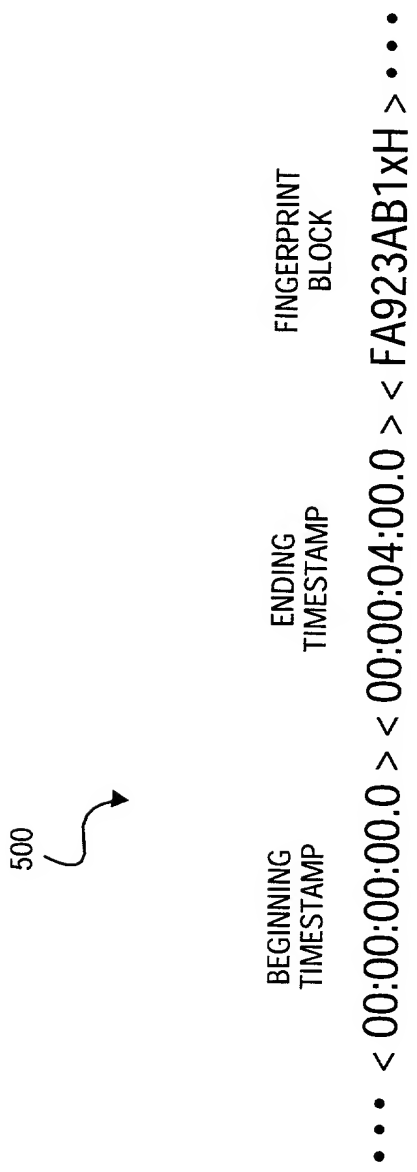
500
BEGINNING TIMESTAMP
ENDING TIMESTAMP
FINGERPRINT BLOCK
• • • < 00:00:00:00.0 > < 00:00:04:00.0 > < FA923AB1xH > • • •

FIG. 5

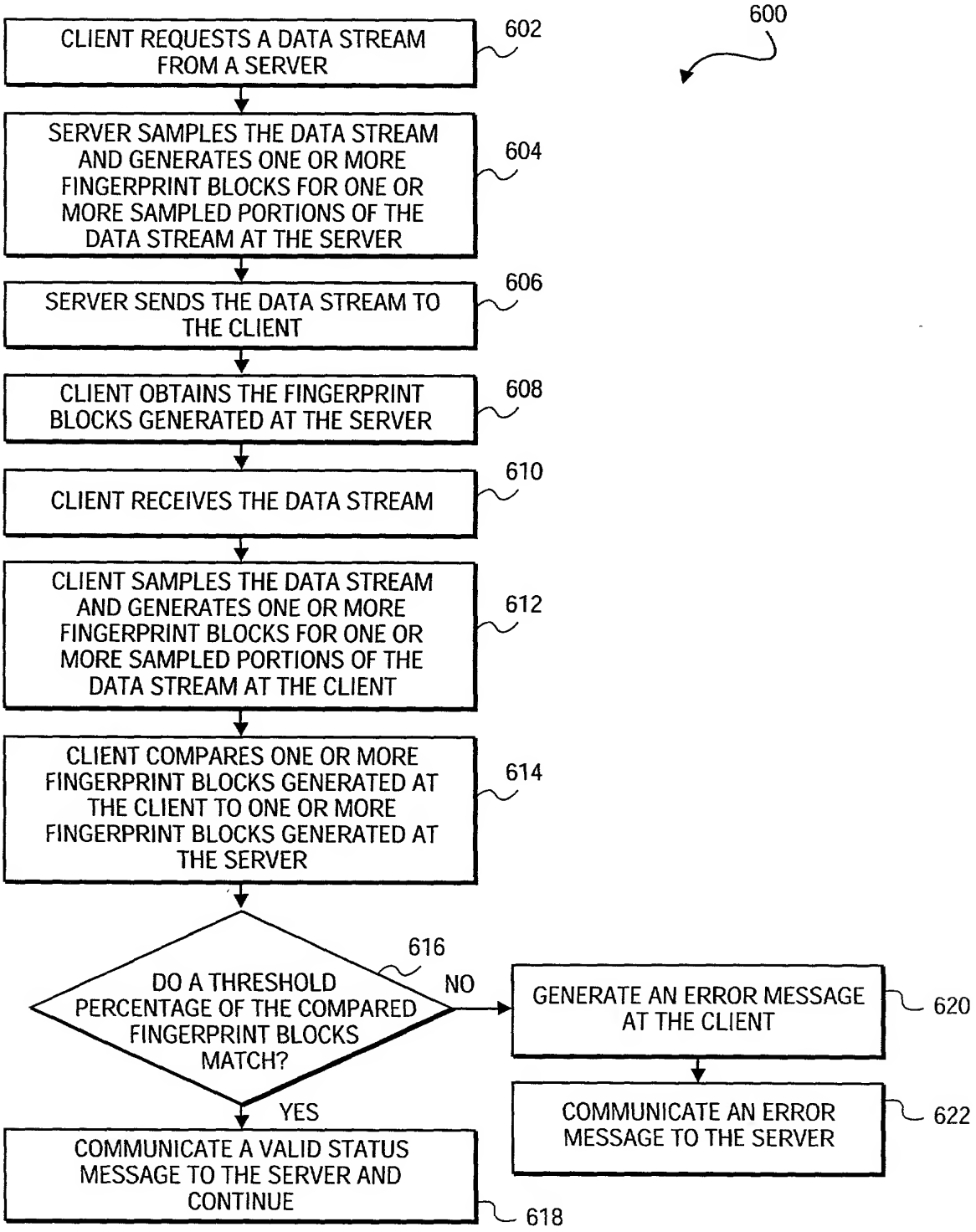
600
CLIENT REQUESTS A DATA STREAM FROM A SERVER
602
SERVER SAMPLES THE DATA STREAM AND GENERATES ONE OR MORE FINGERPRINT BLOCKS FOR ONE OR MORE SAMPLED PORTIONS OF THE DATA STREAM AT THE SERVER
604
SERVER SENDS THE DATA STREAM TO THE CLIENT
606
CLIENT OBTAINS THE FINGERPRINT BLOCKS GENERATED AT THE SERVER
608
CLIENT RECEIVES THE DATA STREAM
610
CLIENT SAMPLES THE DATA STREAM AND GENERATES ONE OR MORE FINGERPRINT BLOCKS FOR ONE OR MORE SAMPLED PORTIONS OF THE DATA STREAM AT THE CLIENT
612
CLIENT COMPARES ONE OR MORE FINGERPRINT BLOCKS GENERATED AT THE CLIENT TO ONE OR MORE FINGERPRINT BLOCKS GENERATED AT THE SERVER
614
DO A THRESHOLD PERCENTAGE OF THE COMPARED FINGERPRINT BLOCKS MATCH?
616
NO
GENERATE AN ERROR MESSAGE AT THE CLIENT
620
COMMUNICATE AN ERROR MESSAGE TO THE SERVER
622
YES
COMMUNICATE A VALID STATUS MESSAGE TO THE SERVER AND CONTINUE
618

FIG. 6